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AUTHOR Sheram, Katherine
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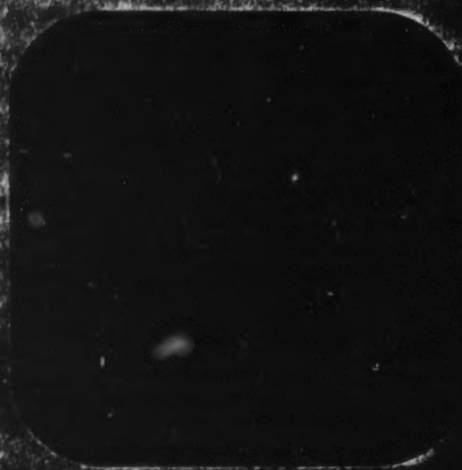
ABSTRACT

This book presents statistics on countries with populations of more than 1 million related to the quality of the environment, economic development, and how each is affected by the other. Sometimes called indicators, the statistics are measures of environmental, economic, and social conditions in developing and industrial countries. The book is divided into four units: water, land, air, and atmosphere. Each unit focuses on one indicator to measure access to safe water, change in forest and woodland, levels of suspended particulate matter, and carbon dioxide emissions. The data tables at the back of the book provide statistics by country for the above mentioned indicators, as well as the following indicators: forest and woodland area, population per passenger car, energy use per capita, chlorofluorocarbon use, gross national product (GNP) per capita, average annual growth of GNP per capita, population, average annual population growth, urban population, life expectancy at birth, infant mortality rate, primary school enrollment rate, secondary school enrollment rate, and adult illiteracy. A list of definitions and notes is included. (MDH)

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The Environmental Data Book

A Guide to Statistics on the Environment and Development



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Introduction

This book presents statistics on countries with populations of more than 1 million. The statistics relate to the quality of the environment, economic development, and how each is affected by the other. Sometimes called indicators, the statistics are measures of environmental, economic, and social conditions in developing and industrial countries.

Although all countries are developing in the sense that they are constantly changing and growing, industrial countries have higher standards of living and many goods and services. Developing countries—both low- and middle-income—have lower standards of living, and many people are not able to meet their basic needs. But all countries, rich and poor, face environmental problems that are often closely linked with efforts to improve people's economic well-being or, sometimes, their very ability to survive.

The relationship between economic development and the environment is complex, and reliable information and data are often scarce. But it is increasingly clear that rising economic activity can both cause environmental problems and, with the right policies and institutions, help solve them. It is also clear that because the world is becoming more interdependent, these issues affect all people in all countries. The *Environmental Data Book* is designed to promote understanding of the relationship between

economic development and the environment by studying statistics.

Statistics can be powerful tools, but they have limitations. They are more accurate for some countries than others. And because it takes a long time to collect and verify them, some are out of date even before they are published. The statistics in this book are the most recent and verifiable ones available at the time of publication. Because the World Bank continuously updates and refines its data, some of the statistics in this book may differ from those shown in earlier World Bank documents.

This book is divided into four units—water, land, air, and atmosphere—each of which focuses on one indicator. The four indicators measure access to safe water, change in forest and woodland, levels of suspended particulate matter, and carbon dioxide emissions. The data tables at the back of the book provide statistics by country for these and other environmental, economic, and social indicators.

A supplemental update of the data tables is issued periodically. For information, contact the Development Education Program, Office of the Publisher, The World Bank, Washington, D.C. 20433, U.S.A.

Other classroom materials are also available. For a copy of the most recent *Catalog of Educational Materials*, contact the Distribution Unit, Office of the Publisher, The World Bank, Washington, D.C. 20433, U.S.A.

What Is the World Bank?

The World Bank—which includes the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA)—is an international institution owned by the governments of more than 170 countries. Its purpose is to help its developing-country members improve economic and social conditions so that their people may live better and fuller lives. It does this by lending money to governments. Most of the money is used for development projects. These projects might help countries increase agricultural productivity; provide basic health care; train teachers; build roads, power stations, schools, and health clinics; modernize industries; expand telecommunications net-

works; or construct water and sewerage facilities. The World Bank also helps governments undertake economic policy reforms, provides advice and technical assistance, and serves as a catalyst to stimulate investment and lending by others. IBRD loans are generally less expensive than commercial bank loans and have longer repayment periods. IDA loans—which are made to the Bank's poorest member countries—are interest-free and have even longer repayment periods. The IBRD began operations in 1946; IDA was founded in 1960. Together their loans to developing countries now amount to about \$20 billion a year.

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The World Bank
Washington, D.C.



Access to Safe Water

Access to safe water is measured by the number of people who have a reasonable means of getting clean water, expressed as a percentage of the total population. It reflects the health of a country's people and the country's ability to collect, clean, and distribute water.

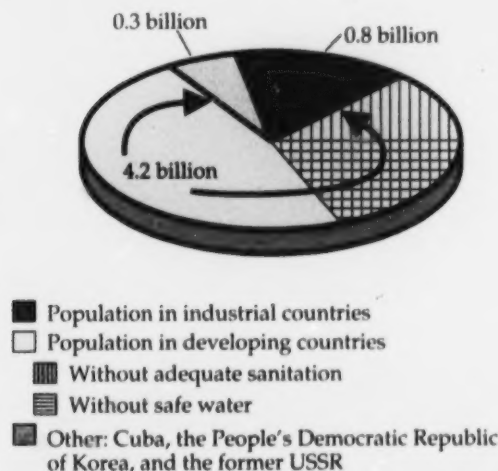
Water, a renewable resource, is essential for life on earth. Lack of safe water and of basic drainage and sewerage systems affects the health, productivity, and quality of life of billions of people in developing countries.

Unsafe water—contaminated largely by human wastes—contributes to 900 million cases of diarrheal illness each year and to the deaths of 3 million people, most of them children. Millions more suffer from other water-related diseases such as hookworm, bilharzia, and elephantiasis. Lack of safe water can cause economic harm as well: factories that depend on water may have to close temporarily; crop yields may decline; fisheries may be destroyed. And there are environmental costs: when people boil household water to make it safer, for example, they burn fuelwood and pollute the air.

Conditions are harshest for the poorest people. In cities in developing countries, the poor often do not have piped water. Instead, they must buy water from street vendors, typically paying ten times what piped water would cost. In rural areas, many women and children must spend hours a day hauling water from rivers and wells.

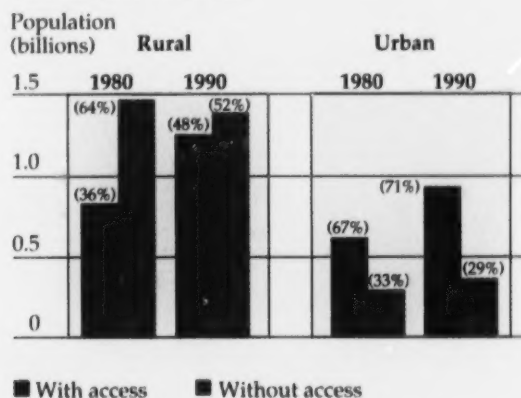
Why is safe water scarce? Governments may lack the money and skills needed to collect, clean, and deliver water to citizens. People at home, on farms, and in factories may waste water because it is cheap or seems plentiful. Many rivers and aquifers are polluted by industrial, agricultural, and human wastes, while others are dwindling because people are using the water faster than nature can replenish it. More people tend to have access to safe water when communities, businesses, and government cooperate to supply this water at a fair price to everyone.

Chart 1. World Population and Access to Safe Water and Sanitation, 1990



There are more than 5.3 billion people in the world, and 4 out of 5 of them live in developing countries. Of these, 1 billion do not have access to safe water for drinking and washing, and 1.7 billion do not have adequate sewerage and drainage. For 1 out of every 3 people alive today, then, lack of safe water and adequate sanitation is a critical environmental problem.

Chart 2. Access to Adequate Sanitation in Developing Countries



Since 1980, overall conditions have improved in developing countries. Millions more people have access to sanitation, and they make up a growing proportion of the total population. Nevertheless, in rural areas, people without access to sanitation still outnumber those with access. And in urban areas, although the percentage of people without access to adequate sanitation declined between 1980 and 1990 (from 33 to 29 percent), the number of people without access actually rose. This is because urban populations are growing rapidly, as more people move to cities and more babies are born.

Map 1. Population with Access to Safe Water, 1990



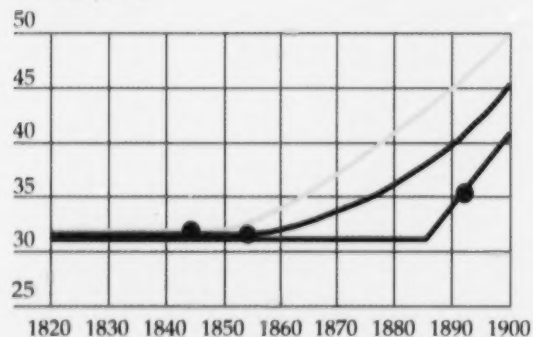
- ☐ Less than 50 percent
- ☐ 50 to 74 percent
- ☐ 75 to 100 percent
- ☐ No data available

In industrial countries a larger proportion of the people have access to safe water than in most developing countries. This is primarily because countries with stronger economies are better able to collect, clean, and deliver water to citizens, who in turn can pay for this service.

Note: The maps in this book show the countries that have recently evolved from the former Czechoslovakia, USSR, and Yugoslavia. The map data, however, are based on Data Tables 1 and 2 and are for years before the breakup of those states.

Chart 3. Life Expectancy and Improvements in Water Supply and Sanitation in 3 French Cities, 1820–1900

Life expectancy at birth (years)



● Year that improvements began

— Lyons — Paris — Marseilles

People are healthier and have a better chance of living longer when they have a supply of safe water and can practice good hygiene. This is what happened to people in France in the nineteenth century. Their life expectancy increased as water and sanitation services improved.

Change in Forest Area

Change in forest area is the increase or decrease in forest and woodland area during a period of time, usually one year, expressed as a percentage of that area at the start of the period. It reflects the gain or loss of trees, of homeland for indigenous peoples, and of habitat for plants and animals.

Almost 30 percent of the earth's land is covered by three basic types of forest: temperate, tropical moist, and tropical dry. Most temperate forests are found in industrial countries. Both tropical moist forests and tropical dry forests are found in developing countries. Forests enrich and hold soil, collect and recycle water, help regulate climate, absorb carbon dioxide, and release oxygen.

In the 1700s and 1800s, industrial countries cleared a third of the world's temperate forests for agriculture, building materials, and fuelwood. Temperate forests are now increasing, but they may not contain the same species of trees. For example, people may plant fast-growing pines to replace slow-growing oaks.

Although tropical moist forests cover only 7 percent of the earth's surface, they are of special concern. Nearly 140 million people depend directly upon them for their livelihood, and they are home to half of all known plant and animal species. These forests are being burned and cut at the rate of about 1 percent a year. At that rate, they will disappear within a few generations.

Why are tropical moist forests being cleared so rapidly? As population and economic activity grow

in developing countries, more people need food, fuelwood, and jobs. So they cut roads and railways into the forests and begin logging, farming, ranching, and mining. They produce wood products, crops, beef, ore, and other goods, which they can often sell for high prices to industrial countries. As the land becomes deforested, however, it quickly loses its fertility, and before long, farmers and ranchers must clear new forest land.

As trees disappear, women and children must work even longer and harder gathering fuelwood. In addition, once trees are cut, the soil no longer absorbs water as well, so flooding may occur that destroys whole villages and erodes fragile topsoil.

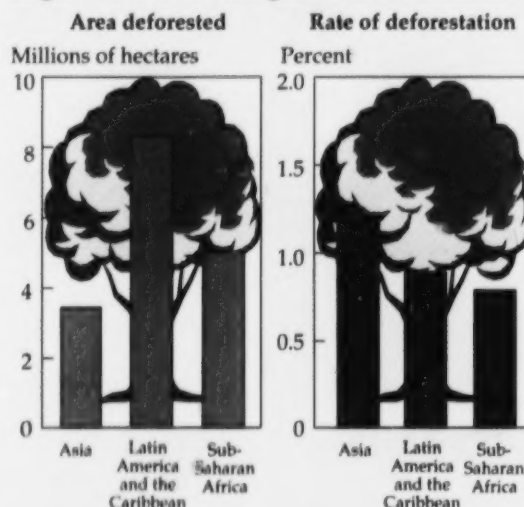
Countries can help prevent the loss of tropical forests. Laws can deter people from clearing trees and

Chart 4. Changes in Land Use, 1965-89

Country group	Average annual growth rate (percent)			
	Crop-land	Permanent pasture	Forest and woodland	All other
Low-income	0.2	0.0	-0.4	0.3
Middle-income	0.7	0.1	-0.4	0.2
Industrial	0.2	-0.1	-0.1	0.1
World	0.3	0.0	-0.2	0.1

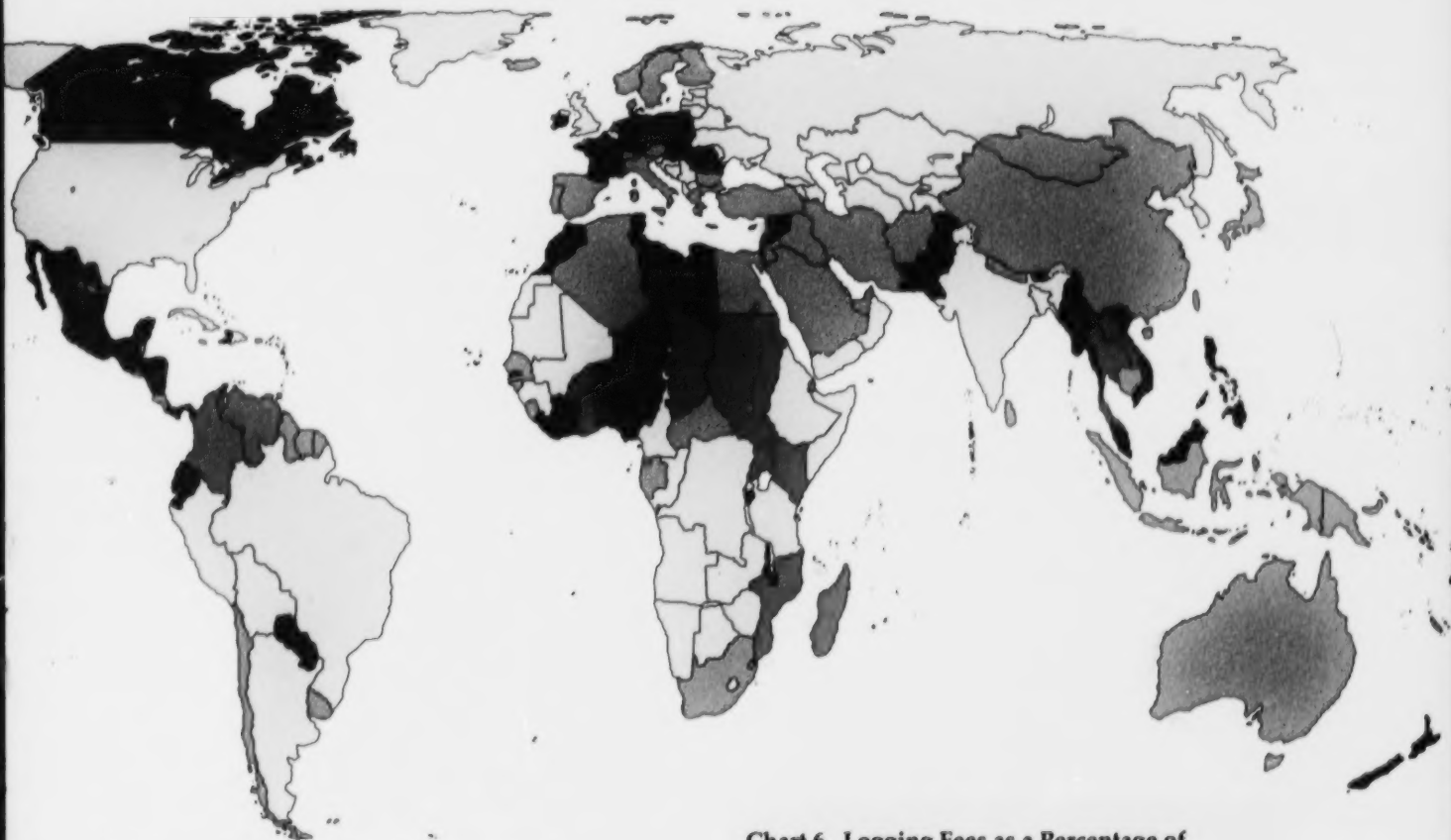
Between 1965 and 1989, the amount of forest and woodland declined worldwide. The decrease was greatest for tropical forests. In tropical moist forests, logging accounts for 20 percent of deforestation, and farming and ranching for more than 60 percent. In tropical dry forests, trees are often cut for fuelwood and to clear land for grazing.

Chart 5. Loss of Tropical Forests in Developing Regions, Annual Averages for 1980-90



In 1980, tropical forests—moist and dry—covered 310.8 million hectares in Asia, 923.0 million hectares in Latin America and the Caribbean, and 650.3 million hectares in Sub-Saharan Africa. Over the decade, tropical forests were lost at an average rate of 0.9 percent a year. Latin America and the Caribbean lost the most forest area, but Asia lost its forests at a faster rate.

Map 2. Change in Forest and Woodland, 1989

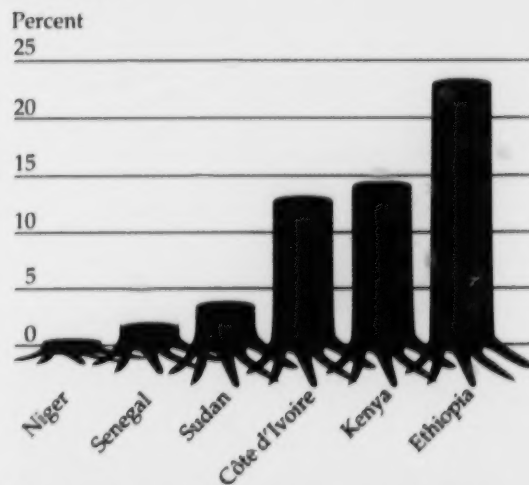


- Very rapid decrease (-1.1 percent or more)
- Rapid decrease (-0.6 to -1.0 percent)
- Moderate decrease (-0.1 to -0.5 percent)
- No change (0.0 percent)
- Increase (+0.1 percent or more)
- No data available

Forest and woodland are decreasing most rapidly in developing countries. Many countries have no net loss of forest area—that is, the amount cleared is equal to the amount replanted. Some countries have a net increase.

can encourage them to plant new ones. Extension workers can promote better planting methods and the use of fertilizer. And economic policies can support tree farming and the harvesting of forest resources, such as nuts or rubber sap.

Chart 6. Logging Fees as a Percentage of Reforestation Cost in 6 African Countries, Late 1980s



Most tropical forests are public property, but most logging is done by private, commercial companies that pay fees to the government. These fees are often a fraction of the cost of replacing the trees the loggers have cut and sold. Forests—like air and water—are renewable resources, but because they are often undervalued, they are in danger of being used up.



Suspended Particulate Matter

Suspended particulate matter (SPM) is smoke, soot, dust, and liquid droplets from fuel combustion that are in the air. The amount of SPM reflects the quality of the air people are breathing and the state of a country's technology and pollution control.

Air pollution is a problem that can affect anyone—rich or poor, in cities or on farms, in developing or industrial countries. Although data are still limited, a growing network of experts now monitors air quality in cities worldwide.

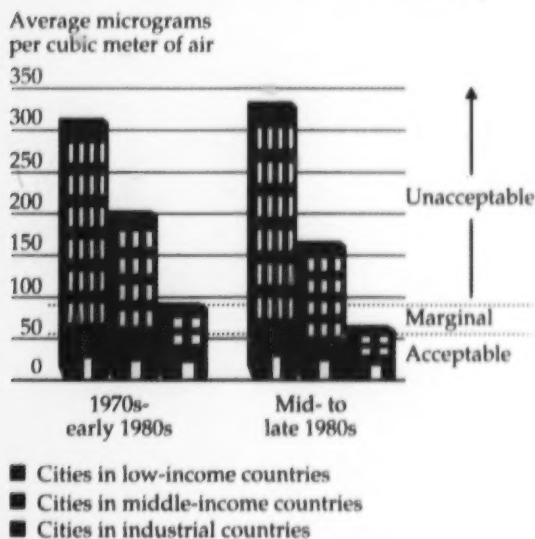
Between 400 million and 700 million people—most often women and children in developing countries—breathe harmful fumes inside their homes as they burn wood, charcoal, and dung for cooking and heating. People use these fuels because they are inexpensive and often the only ones available. But the level of SPM indoors can often be 40 times what is safe. The health consequences are similar to the effects of smoking several packs of cigarettes a day.

In urban areas, more than 1 billion people breathe unhealthy air caused by burning fossil fuels—especially coal and oil—to run motor vehicles, industrial machines, energy-generating power stations, and

other devices. This kind of air pollution is responsible for 300,000 to 700,000 premature deaths a year and for half of chronic coughing in children. Most of the people at risk live in developing countries, especially China and India.

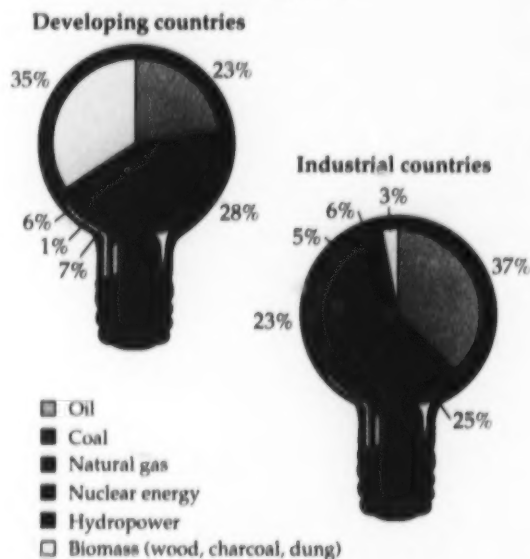
As countries develop their economies, they need more and more energy. Today the primary source of energy for industry is fossil fuels, but many countries are seeking cleaner, more renewable sources of energy, such as hydropower, geothermal energy, solar energy, and wind. They are also working to reduce air pollution by using cleaner fossil fuels (such as natural gas and higher-grade coal), burning these fuels more efficiently, limiting the use of cars and trucks, increasing energy prices, enforcing emissions standards, and supporting cleaner ways to produce energy, goods, and services.

Chart 7. Suspended Particulate Matter in Cities



Urban air pollution—especially from soot and smoke—has increased in the poorest countries but decreased in middle-income and industrial countries. Environmental conditions tend to improve when a country recognizes the value of its natural resources (such as clean air, safe water, fertile topsoil, and abundant forests), makes and enforces laws to protect those resources, and has the money to tackle environmental problems.

Chart 8. Sources of Energy, 1987



In developing countries, biomass is the largest source of energy for people in their homes. Finding ways to reduce health risks from such fuel—for example, by installing chimneys that vent harmful fumes outside—can help improve the physical quality of life for millions of people. Also, providing alternative fuels may mean that fewer trees are cut for fuelwood and charcoal and that more dung is available as an inexpensive fertilizer.

Map 3. SPM Levels for Various Cities, 1987-90 (or most recent estimate)

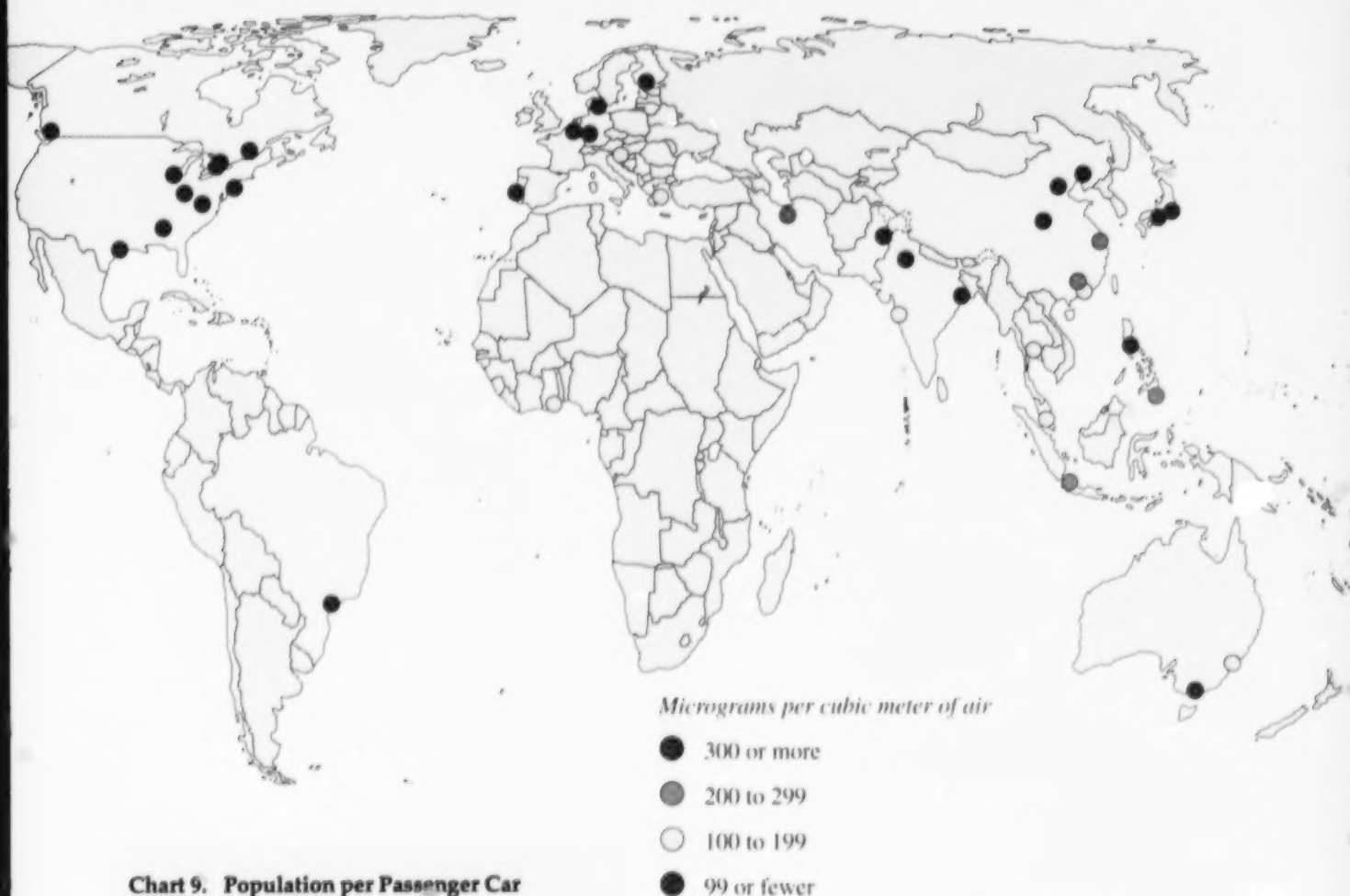


Chart 9. Population per Passenger Car

Country	1960-65	1970-75	1989
Brazil	74	22	10
China	No data	8,124	4,345
India	1,138	807	553
Japan	45	6	4
Mexico	59	26	15
United States	3	2	2
Zaire	470	240	298

Passenger cars are much more common in industrial countries than in developing countries, but the number of cars has tended to increase at a faster rate in developing countries. Although motor vehicles are still relatively scarce in these countries, they can cause serious air pollution because they are concentrated in a few large cities, many of them are in poor mechanical condition, few emissions standards exist, and leaded fuel is still widely used. In Bangkok, Thailand, for example, studies suggest that the average child loses 4 IQ points by age 7 from exposure to high levels of lead.

Urban levels of suspended particulate matter tend to be higher in developing countries than in industrial countries. The data focus on cities, rather than rural areas, because air pollution tends to be worse where there is a high concentration of people.



Carbon Dioxide Emissions per Capita

Carbon dioxide (CO₂) emissions per capita are measured as the tons of carbon a country releases into the atmosphere during a period of time, usually one year, divided by its total population. They reflect how industrialized a country is and how much energy its people consume.

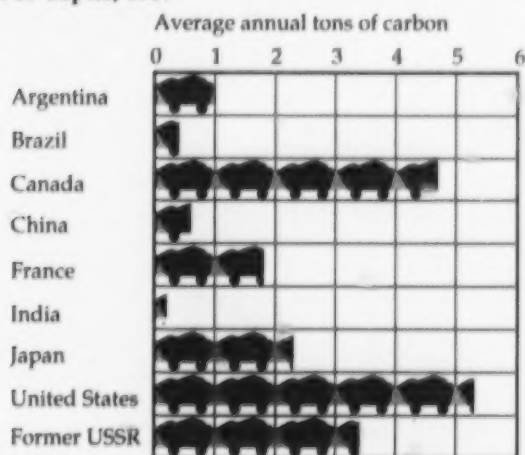
Carbon dioxide (CO₂), one of several greenhouse gases that trap solar heat within the earth's atmosphere, accounts for the largest share of the global warming effect that is linked to human activity. Most of this CO₂ is released into the atmosphere when countries burn fossil fuels, especially coal. Burning forests accounts for about a quarter of carbon dioxide emissions.

Because the earth's environmental systems are so vastly complex and evolve so slowly over time, it is sometimes difficult to know how human activities will affect them. The extent to which our increased emissions of carbon dioxide and other greenhouse gases will change the earth's climate remains unclear. A group of leading scientists worldwide judges that average temperatures may rise 1.5 to 4.5 degrees Celsius by the year 2500. In the early 1980s experts believed that this temperature increase

could cause the level of the sea to rise by several meters. By 1990, however, they had revised their estimate to between 0.2 and 0.7 meters by the year 2070.

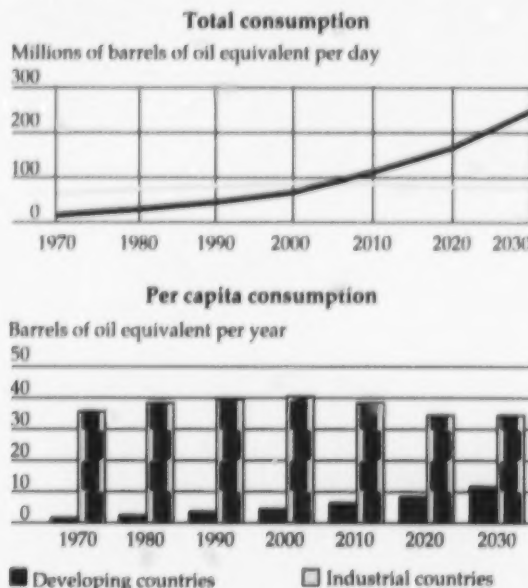
In any case, forests and other ecosystems may not adapt easily to the resulting climate changes; small islands and low-lying nations may be at risk of flooding; and fragile agricultural land may be damaged by the salt brought in by the sea water. These physical changes would in turn affect the global economy. Countries with stronger economies that produce a variety of goods and services would tend to be better able to cope with the changes.

Chart 10. Carbon Dioxide Emissions Per Capita, 1989



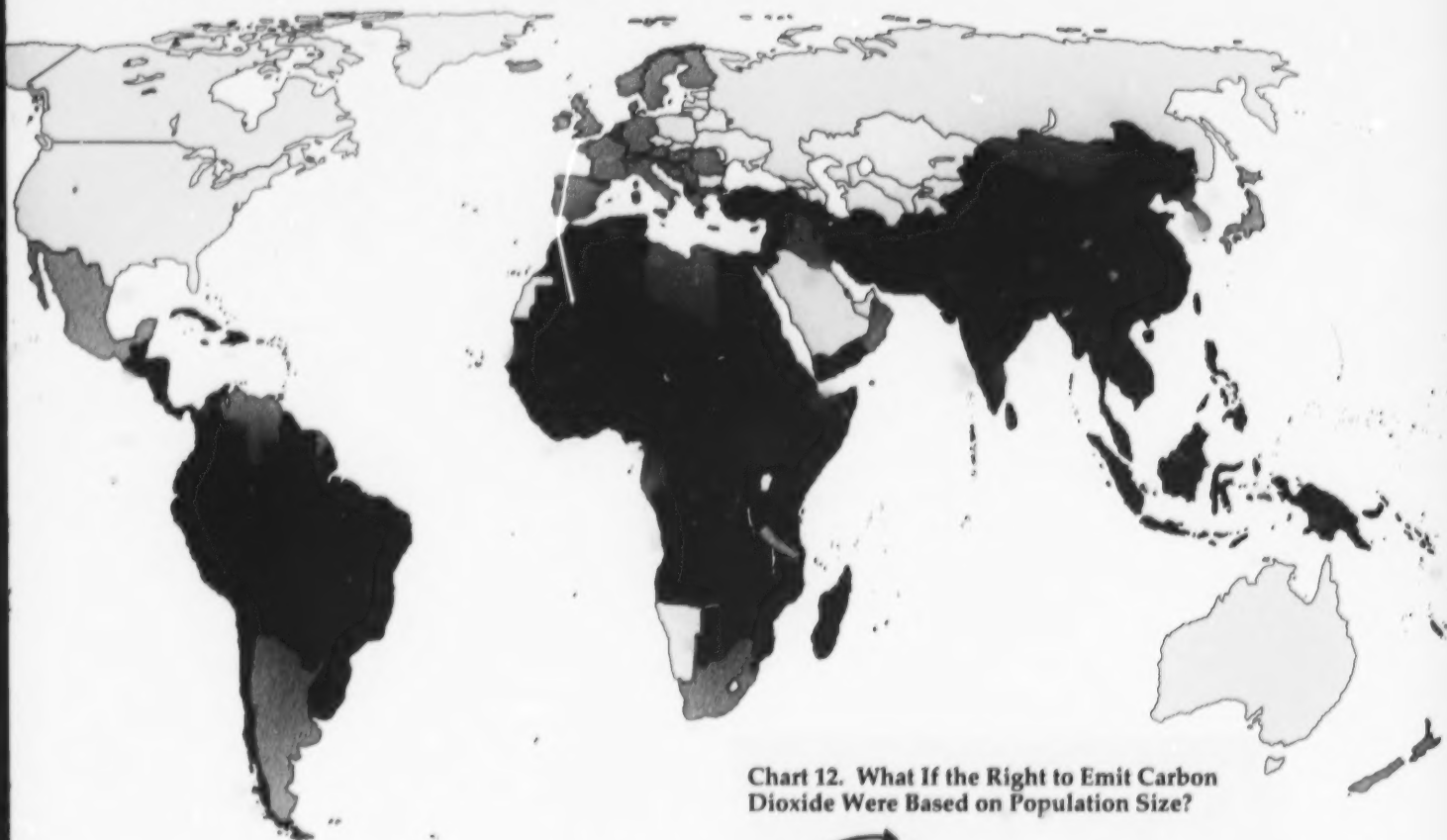
Industrial countries emit large amounts of greenhouse gases and have been doing so for many years. In 1989, per capita carbon dioxide emissions in the United States (with 249 million people) were almost 10 times those in China (with 1.1 billion people). In the 1970s and 1980s, carbon dioxide emissions in industrial countries increased by 15 percent as people in those countries used more and more energy.

Chart 11. Commercial Energy Consumption, 1970-2030



These data assume that countries will use energy more and more efficiently, so that in the future, energy consumption will increase at a slower rate than in the past. Nevertheless, as their economies grow over the next decades, developing countries will use increasing amounts of energy to generate more electricity, build more factories, produce more goods, and operate more vehicles. Their per capita energy use, however, will remain low because of their growing populations. Industrial countries will continue much as before: small populations will consume large amounts of energy.

Map 4. Carbon Dioxide Emissions Per Capita, 1989



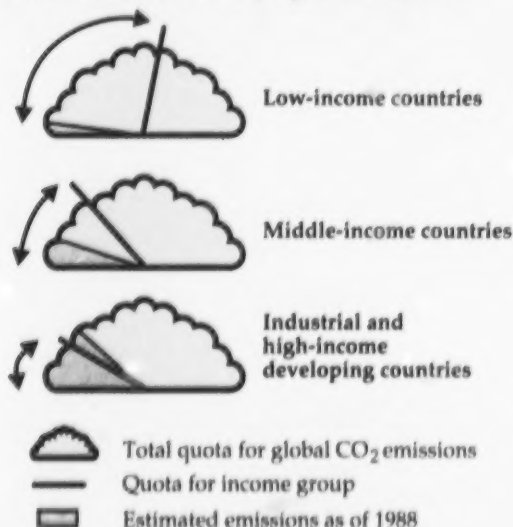
Tons of carbon per capita

- ☐ 3.1 or more
- ☐ 1.1 to 3.0
- ☐ 1.0 or fewer
- ☐ No data available

Carbon dioxide emissions per capita tend to be higher in high-income countries than in low- and middle-income countries. The data on the map are for CO₂ emissions that result from burning fossil fuels and manufacturing cement, activities that are associated with the industrialization process.

To decrease greenhouse gas emissions, both rich and poor countries know they must generate and use energy more efficiently and take advantage of cleaner production technologies. They are learning that energy prices must reflect the real costs of supply. And many of them are trying to shift from fossil fuels to more renewable sources of energy.

Chart 12. What If the Right to Emit Carbon Dioxide Were Based on Population Size?



Assume, for the sake of fairness, that every person on earth has an equal right to the atmosphere as a resource. Then CO₂ emission quotas for countries would be determined by population size. What would this scenario look like? Low- and middle-income countries would not yet have reached their quotas; they would have the right to continue emitting CO₂. The richest countries, however, would have already exceeded their quota and could no longer emit CO₂.

Data Table 1

		(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)
Region and country		Access to safe water (percentage of population) 1990	Change in forest and woodland (annual percentage) 1989	Forest and woodland area (thousands of square kilometers) 1989	Population per passenger car 1989	Energy use per capita (kilograms of oil equivalent) 1965 1990		Carbon dioxide emissions per capita (tons of carbon) 1989	CFC use, net annual atmospheric increase (thousands of metric tons) 1986	GNP per capita (US dollars) 1990	Average annual growth of GNP per capita (percent) 1965-90
North and Central America and the Caribbean											
■	1 Canada	*	0.6	3,580,000	2	6,007	10,009	4.73	21	20,470	2.7
■	2 Costa Rica	93.0	0.0	16,400	19	267	622	0.24	0	1,900	1.4
N	3 Cuba	..	..	..	..	..	..	..	..	..	..
■	4 Dominican Rep.	67.4	-0.3	6,170	44	127	336	0.26	1	830	2.3
■	5 El Salvador	46.6	0.0	1,040	36	140	233	0.12	1	1,110	-0.4
■	6 Guatemala	61.3	-2.0	38,300	79	150	171	0.12	1	900	0.7
■	7 Haiti	41.0	-4.8	400	..	23	53	0.03	0	370	0.2
■	8 Honduras	64.3	-2.3	33,400	128	111	198	0.11	0	590	0.5
■	9 Jamaica	*	-0.5	1,860	22	703	931	0.55	0	1,500	-1.3
■	10 Mexico	70.0	-1.2	430,000	15	605	1,300	1.01	5	2,490	2.8
■	11 Nicaragua	54.3	-3.1	34,900	84	172	261	0.16	0	..	-3.3
■	12 Panama	82.0	-1.5	33,400	16	3,065	1,694	0.31	0	1,830	1.4
■	13 Trinidad and Tobago	96.4	-0.5	2,210	5	4,492	5,940	4.02	0	3,610	0.0
■	14 United States	*	-0.1	2,939,000	2	6,535	7,822	5.37	197	21,790	1.7
South America											
■	15 Argentina	66.0	-0.2	593,000	8	975	1,801	1.01	3	2,370	-0.3
■	16 Bolivia	53.4	-0.1	556,500	191	156	257	0.19	0	630	-0.7
■	17 Brazil	86.7	-0.4	5,531,300	10	286	915	0.38	9	2,680	3.3
■	18 Chile	87.0	0.0	88,000	20	652	887	0.67	1	1,940	0.4
■	19 Colombia	64.0	-0.6	506,000	37	412	811	0.45	3	1,260	2.3
■	20 Ecuador	54.5	-2.6	112,000	68	162	678	0.40	1	980	2.8
■	21 Paraguay	32.4	-4.0	143,500	..	84	232	0.11	0	1,110	4.6
■	22 Peru	53.0	-0.4	686,500	54	395	509	0.27	0	1,160	-0.2
■	23 Uruguay	*	0.0	6,690	14	765	821	0.42	0	2,560	0.8
■	24 Venezuela	80.0	-0.9	304,650	11	2,319	2,582	1.36	2	2,560	-1.0
Europe											
■	25 Albania	..	-0.1	10,460	..	420	1,152	0.83	0	..	..
■	26 Austria	*	0.0	32,000	3	2,060	3,503	1.86	5	19,060	2.9
■	27 Belgium	92.0	..	..	3	..	2,807	2.72	7	15,540	2.6
■	28 Bulgaria	..	0.0	38,680	7	1,788	4,945	3.24	1	2,250	..
■	29 Former Czechoslovakia	100.0	0.2	46,150	5	3,374	5,081	3.95	2	3,140	..
■	30 Denmark	*	0.0	4,930	3	2,911	3,618	2.50	4	22,080	2.1
■	31 Finland	99.0	0.0	232,220	3	2,233	5,650	2.82	4	26,040	3.2
■	32 France	100.0	0.6	147,820	2	2,468	3,845	1.74	39	19,490	2.4
■	33 Germany	*	0.1	103,840	3	2,478	3,491	2.86	43	22,320	2.4
■	34 Greece	..	0.0	26,200	7	615	2,092	1.93	7	5,990	2.8
■	35 Hungary	99.0	0.6	16,880	6	1,825	3,211	1.65	1	2,780	..
■	36 Ireland	*	0.6	3,410	5	1,504	2,653	2.17	3	9,550	3.0
■	37 Italy	*	0.0	67,370	2	1,564	2,754	1.86	40	16,830	3.0
■	38 Netherlands	100.0	0.0	3,000	3	3,134	5,123	2.30	10	17,320	1.8
■	39 Norway	*	0.0	83,300	3	4,650	9,083	2.99	1	23,120	3.4
■	40 Poland	89.0	0.1	87,480	8	2,027	3,416	3.15	8	1,690	..
■	41 Portugal	..	0.0	29,680	5	506	1,507	1.09	7	4,900	3.0
■	42 Romania	..	0.3	63,720	19	1,536	3,623	2.50	0	1,640	..
■	43 Spain	98.0	0.0	156,500	3	901	2,201	1.42	28	11,020	2.4
■	44 Sweden	*	0.0	280,200	2	4,162	6,347	1.91	4	23,660	1.9
■	45 Switzerland	*	0.0	10,520	2	2,501	3,902	1.62	6	32,680	1.4
■	46 Turkey	..	0.0	201,990	38	257	857	0.63	5	1,630	2.6
■	47 United Kingdom	100.0	-0.2	23,640	3	3,483	3,646	2.70	40	16,100	2.0
N	48 Former USSR	..	..	..	..	..	..	3.60	..	..	..
■	49 Former Yugoslavia	75.0	-0.3	93,340	8	898	2,409	1.53	5	3,060	2.9
The Middle East and North Africa											
■	50 Algeria	75.0	0.0	46,990	56	226	1,956	0.52	2	2,060	2.1
■	51 Egypt	89.8	0.0	310	49	313	598	0.42	3	600	4.1
■	52 Iran, Islamic Rep.	71.0	0.0	180,200	642	524	1,026	0.85	5	2,490	0.1
■	53 Iraq	77.7	0.0	18,900	62	399	774	1.03	2	..	..
■	54 Israel	*	0.0	1,100	7	1,574	2,050	1.98	3	10,920	2.6
■	55 Jordan	..	0.0	710	17	393	994	0.66	0	1,240	..
■	56 Kuwait	*	0.0	20	4	..	6,414	4.30	1	16,150	-4.0
■	57 Lebanon	..	0.0	800	12	713	968	0.89	0	..	..
■	58 Libya	*	0.7	6,850	9	222	3,399	2.36	0	..	-3.0
■	59 Morocco	55.6	0.2	79,300	42	124	247	0.25	0	950	2.3
■	60 Oman	58.0	..	..	137	14	2,648	1.93	0	..	6.4
■	61 Saudi Arabia	93.0	0.0	12,000	99	1,759	5,033	3.49	4	7,050	2.6
■	62 Syrian Arab Rep.	..	32.2	7,180	89	212	913	0.64	0	1,000	2.9
■	63 Tunisia	68.0	1.6	6,300	44	170	520	0.48	1	1,440	3.2

■ Low-income country
■ Middle-income country

■ High-income developing country
■ Industrial country

N Nonmember country
.. Data not available

* Estimated to be greater than 90 percent
† Less than 5 percent

(10)	(11)	(12)		(13)	(14)	(15)		(16)		(17)	
Population (millions) 1990	Average annual population growth (percent) 1980-90	Urban population (percentage of total population)		Life expectancy at birth (years) 1990	Infant mortality (per 1,000 live births) 1990	Primary school enrollment (percentage of age group) 1989		Secondary school enrollment (percentage of age group) 1989		Adult illiteracy (percentage of total population) 1990	Region and country
		1965	1990			Total	Female	Total	Female		
North and Central America and the Caribbean											
27	1.0	73	77	77	7	105	105	105	105	†	Canada
3	2.4	38	47	75	16	100	99	41	42	7	Costa Rica
11	..	58	75	76	12	103	100	..	..	..	Cuba
7	2.2	35	60	67	56	95	96	..	..	17	Dominican Rep.
5	1.4	39	44	64	53	78	78	26	26	27	El Salvador
9	2.9	34	39	63	62	79	..	21	..	45	Guatemala
6	1.9	18	28	54	95	84	81	19	19	47	Haiti
5	3.4	26	44	65	64	108	109	..	..	27	Honduras
2	1.3	38	52	73	16	105	105	61	64	†	Jamaica
86	2.0	55	73	70	39	114	112	53	53	13	Mexico
4	3.4	43	60	65	55	99	104	43	58	..	Nicaragua
2	2.1	44	53	73	21	107	105	59	63	12	Panama
1	1.3	30	69	71	25	97	98	83	84	..	Trinidad and Tobago
250	0.9	72	75	76	9	..	..	..	..	†	United States
South America											
32	1.3	76	86	71	29	111	114	74	78	5	Argentina
7	2.5	40	51	60	92	81	77	34	31	23	Bolivia
150	2.2	50	75	66	57	105	..	39	45	19	Brazil
13	1.7	72	86	72	17	100	99	75	78	7	Chile
32	2.0	54	70	69	37	107	108	52	53	13	Colombia
10	2.4	37	56	66	55	118	117	56	57	14	Ecuador
4	3.2	36	48	67	32	106	104	29	30	10	Paraguay
22	2.3	52	70	63	69	123	..	67	..	15	Peru
3	0.6	81	86	73	21	106	106	77	..	4	Uruguay
20	2.7	70	84	70	34	105	105	56	62	12	Venezuela
Europe											
3	2.0	32	35	72	28	99	98	80	73	..	Albania
8	0.2	51	58	76	8	104	103	82	83	†	Austria
10	0.1	93	97	76	8	101	101	99	100	†	Belgium
9	0.0	46	68	73	14	97	96	75	76	..	Bulgaria
16	0.3	51	78	72	12	92	93	87	90	..	Former Czechoslovakia
5	0.0	77	87	75	8	98	98	109	110	†	Denmark
5	0.4	44	60	76	6	99	99	112	121	†	Finland
56	0.5	67	74	77	7	113	111	97	100	†	France
79	0.1	78	84	76	7	103	104	97	96	†	Germany
10	0.4	48	63	77	11	102	102	97	94	7	Greece
11	-0.2	43	61	71	15	94	94	76	77	..	Hungary
4	0.2	49	57	74	7	101	101	97	102	..	Ireland
58	0.2	62	69	77	9	96	96	78	78	3	Italy
15	0.5	86	89	77	7	116	117	103	101	†	Netherlands
4	0.4	58	75	77	8	98	98	98	101	†	Norway
38	0.7	50	62	71	16	99	99	81	83	..	Poland
10	0.6	24	34	75	12	111	108	53	54	15	Portugal
23	0.4	38	53	70	27	95	95	88	92	..	Romania
39	0.4	61	78	76	8	111	110	105	111	5	Spain
9	0.3	77	84	78	6	104	104	91	93	†	Sweden
7	0.6	53	60	78	7	..	..	..	..	†	Switzerland
56	2.4	34	61	67	60	112	108	51	39	19	Turkey
57	0.2	87	89	76	8	107	107	82	84	†	United Kingdom
289	..	52	66	71	24	105	105	..	..	..	Former USSR
24	0.7	31	56	72	20	95	95	80	79	7	Former Yugoslavia
The Middle East and North Africa											
25	3.0	38	52	65	67	94	86	61	53	43	Algeria
52	2.4	41	47	60	66	97	89	81	71	52	Egypt
56	3.6	37	57	63	88	109	101	53	44	46	Iran, Islamic Rep.
19	3.6	51	71	63	65	96	87	47	37	40	Iraq
5	1.8	81	92	76	10	93	95	83	86	..	Israel
3	3.7	..	61	67	51	..	..	..	..	20	Jordan
2	4.4	78	96	74	14	100	91	90	87	27	Kuwait
..	..	50	..	65	..	..	..	..	..	20	Lebanon
5	4.1	26	70	62	74	..	..	..	..	36	Libya
25	2.6	32	48	62	67	68	55	36	30	51	Morocco
2	4.7	4	11	66	33	102	97	48	40	..	Oman
15	4.7	39	77	64	65	76	70	46	39	38	Saudi Arabia
12	3.6	40	50	66	43	108	102	54	45	36	Syrian Arab Rep.
8	2.3	40	54	67	44	115	107	44	39	35	Tunisia

Note: Table includes countries with 1 million population or more. Numbers in italics are for years other than those listed.

(Data table continues on next page.)

Data Table 1 (continued)

	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)
Region and country	Access to safe water (percentage of population) 1990	Change in forest and woodland (annual percentage) 1989	Forest and woodland area (thousands of square kilometers) 1989	Population per passenger car 1989	Energy use per capita (kilograms of oil equivalent)		Carbon dioxide emissions per capita (tons of carbon) 1989	CFC use, net annual atmospheric increase (thousands of metric tons) 1986	GNP per capita (US dollars) 1990	Average annual growth of GNP per capita (percent) 1965-90
	1990	1989	1989	1989	1965	1990	1989	1986	1990	1965-90
The Middle East and North Africa (continued)										
■ 64 United Arab Emirates	..	0.0	30	6	126	10,874	8.99	1	19,860	..
■ 65 Yemen, Rep.	..	-0.3	31,100	..	6	234	0.40	0	..	..
Sub-Saharan Africa										
■ 66 Angola	31.0	-0.2	529,500	48	114	203	0.14	0	..	..
■ 67 Benin	57.0	-1.4	35,200	162	21	46	0.04	0	360	-0.1
■ 68 Botswana	54.0	-0.1	109,200	67	191	425	0.37	0	2,040	8.4
■ 69 Burkina Faso	65.0	-0.9	66,600	723	7	17	0.02	0	330	1.3
■ 70 Burundi	26.0	1.5	660	448	5	21	0.01	0	210	3.4
■ 71 Cameroon	30.0	-0.4	246,500	151	67	147	0.14	0	960	3.0
■ 72 Central African Rep.	..	0.0	358,100	219	22	30	0.02	0	390	-0.5
■ 73 Chad	..	-0.6	128,100	456	12	17	0.01	0	190	-1.1
■ 74 Congo	..	-0.1	211,800	75	90	213	0.22	..	1,010	3.1
■ 75 Côte d'Ivoire	..	-3.2	76,300	64	101	173	0.18	1	750	0.5
■ 76 Ethiopia	14.0	-0.4	272,000	957	10	20	0.01	0	120	-0.2
■ 77 Gabon	..	0.0	200,000	62	153	1,158	1.88	0	3,330	0.9
■ 78 Ghana	56.0	-0.9	81,400	160	76	68	0.07	1	390	-1.4
■ 79 Guinea	20.0	-0.4	146,400	155	64	73	0.05	0	440	..
■ 80 Kenya	..	-0.8	23,600	160	110	100	0.06	0	370	1.9
■ 81 Lesotho	35.0	..	..	253	0	0	..	0	530	4.9
■ 82 Liberia	54.0	-1.1	17,600	172	179	169	0.08	0	..	..
■ 83 Madagascar	31.0	-0.9	156,800	138	34	40	0.02	0	230	-1.9
■ 84 Malawi	55.0	-2.9	37,400	516	25	41	0.02	0	200	0.9
■ 85 Mali	17.0	-0.4	69,800	389	14	24	0.01	0	270	1.7
■ 86 Mauritania	..	-0.2	49,400	157	48	114	0.42	0	500	-0.6
■ 87 Mauritius	100.0	0.0	570	24	160	394	0.26	0	2,250	3.2
■ 88 Mozambique	14.0	-0.8	143,800	419	81	85	0.02	0	80	..
■ 89 Namibia	..	-0.2	181,500	..	..	..	..	..	..	..
■ 90 Niger	46.0	-2.8	20,600	282	8	40	0.04	0	310	-2.4
■ 91 Nigeria	41.0	-2.4	122,000	285	34	138	0.21	10	290	0.1
■ 92 Rwanda	49.0	-0.5	5,570	914	8	41	0.01	0	310	1.0
■ 93 Senegal	55.0	0.0	59,420	..	342	156	0.12	1	710	-0.6
■ 94 Sierra Leone	26.0	0.0	20,700	152	109	77	0.05	0	240	0.0
■ 95 Somalia	31.0	-0.1	90,700	575	11	64	0.04	0	120	-0.1
■ 96 South Africa	..	0.0	45,150	10	1,744	2,447	2.20	3	2,530	1.3
■ 97 Sudan	..	-0.7	451,400	250	67	58	0.04	0	..	..
■ 98 Tanzania	49.0	-0.3	410,600	379	37	38	0.02	0	110	-0.2
■ 99 Togo	26.7	-0.6	16,100	1,254	27	51	0.05	0	410	-0.1
■ 100 Uganda	21.0	-0.9	56,100	440	36	27	0.01	0	220	-2.4
■ 101 Zaire	33.0	-0.2	1,746,400	298	75	71	0.03	0	220	-2.2
■ 102 Zambia	58.0	-0.2	289,200	54	464	379	0.09	0	420	-1.9
■ 103 Zimbabwe	..	-0.4	192,100	33	441	525	0.47	1	640	0.7
Asia and the Pacific										
■ 104 Afghanistan	22.5	0.0	19,000	287	30	90	0.11	0	..	..
■ 105 Australia	*	0.0	1,060,000	2	3,287	5,041	4.22	12	17,000	1.9
■ 106 Bangladesh	78.2	-0.5	19,500	6,751	..	57	0.03	0	210	0.7
■ 107 Bhutan	33.9	0.2	26,050	..	..	13	0.01	0	190	..
■ 108 Cambodia	..	0.0	133,720	387	19	59	0.02	0	..	..
■ 109 China	71.3	0.0	1,246,000	4,345	178	598	0.59	18	370	5.8
■ 110 Hong Kong (UK)	99.8	0.0	120	35	584	1,717	1.43	..	11,490	6.2
■ 111 India	72.5	-0.2	667,360	553	100	231	0.21	0	350	1.9
■ 112 Indonesia	41.6	0.0	1,134,330	144	91	272	0.21	5	570	4.5
■ 113 Japan	*	0.0	251,050	4	1,474	3,563	2.31	58	25,430	4.1
N 114 Korea, People's Dem. Rep.	..	..	..	..	..	..	1.90	2	..	..
■ 115 Korea, Rep.	93.0	-0.1	64,850	38	238	1,898	1.42	3	5,400	7.1
■ 116 Lao PDR	28.3	-0.8	128,000	211	24	39	0.02	0	200	..
■ 117 Malaysia	78.4	-1.2	191,000	11	313	974	0.77	1	2,320	4.0
■ 118 Mongolia	..	0.0	139,150	..	461	1,277	1.32	0	..	..
■ 119 Myanmar	32.5	0.1	324,180	649	39	82	0.03	0	..	..
■ 120 Nepal	36.7	0.0	24,800	3,831	6	25	0.01	0	170	0.5
■ 121 New Zealand	97.0	0.4	73,200	2	2,622	4,971	2.12	2	12,680	1.1
■ 122 Pakistan	43.0	1.2	35,000	189	135	233	0.14	0	380	2.5
■ 123 Papua New Guinea	32.8	0.0	382,300	212	56	233	0.16	0	860	0.1
■ 124 Philippines	81.0	-1.9	105,500	156	158	215	0.18	0	730	1.3
■ 125 Singapore	100.0	0.0	30	12	2,214	5,685	3.64	2	11,160	6.5
■ 126 Sri Lanka	60.0	0.0	17,470	111	106	179	0.06	0	470	2.9
■ 127 Thailand	64.0	-1.0	142,400	71	82	352	0.39	2	1,420	4.4
■ 128 Viet Nam	35.6	0.3	98,000	..	97	100	0.08	0	..	..

■ Low-income country
■ Middle-income country

■ High-income developing country
■ Industrial country

N Nonmember country
.. Data not available

* Estimated to be greater than 90 percent
† Less than 5 percent

(10)	(11)	(12)		(13)	(14)	(15)		(16)		(17)	
Population (millions) 1990	Average annual population growth (percent) 1980-90	Urban population (percentage of total population)		Life expectancy at birth (years) 1990	Infant mortality (per 1,000 live births) 1990	Primary school enrollment (percentage of age group) 1989		Secondary school enrollment (percentage of age group) 1989		Adult illiteracy (percentage of total population) 1990	Region and country
		1965	1990			Total	Female	Total	Female		
The Middle East and North Africa (continued)											
2	4.3	41	78	72	23	111	110	64	69	..	United Arab Emirates
11	3.1	11	29	48	124	..	..	..	..	62	Yemen, Rep.
Sub-Saharan Africa											
10	2.6	13	28	46	130	94	..	11	..	58	Angola
5	3.2	13	38	50	113	65	44	..	..	77	Benin
1	3.3	4	28	67	38	111	114	37	39	26	Botswana
9	2.6	5	9	48	134	35	27	7	5	82	Burkina Faso
5	2.8	2	6	47	107	71	60	4	3	50	Burundi
12	3.0	16	41	57	88	101	93	26	21	46	Cameroon
3	2.7	27	47	49	101	64	48	11	6	62	Central African Rep.
6	2.4	9	30	47	125	57	35	7	3	70	Chad
2	3.4	..	..	53	116	..	..	..	..	43	Congo
12	3.8	23	40	55	95	..	..	20	12	46	Côte d'Ivoire
51	3.1	8	13	48	132	38	30	15	12	..	Ethiopia
1	3.6	21	46	53	97	..	..	..	..	39	Gabon
15	3.4	26	33	55	85	75	67	39	30	40	Ghana
6	2.5	12	26	43	138	34	21	9	5	76	Guinea
24	3.8	9	24	59	67	94	92	23	19	31	Kenya
2	2.7	6	20	56	93	110	119	26	31	..	Lesotho
3	3.1	22	46	54	136	..	..	..	..	61	Liberia
12	3.0	12	25	51	116	92	90	19	18	20	Madagascar
9	3.4	5	12	46	149	67	60	4	3	..	Malawi
8	2.5	13	19	48	166	23	17	6	4	68	Mali
2	2.4	9	47	47	121	51	42	16	10	66	Mauritania
1	1.0	37	41	70	20	103	104	53	53	..	Mauritius
16	2.6	5	27	47	137	68	59	5	4	67	Mozambique
2	3.2	17	28	57	100	..	..	..	..	..	Namibia
8	3.3	7	20	45	128	28	20	6	4	72	Niger
115	3.2	17	35	52	98	70	63	19	16	49	Nigeria
7	3.3	3	8	48	120	69	68	7	6	50	Rwanda
7	2.9	33	38	47	81	58	49	16	11	62	Senegal
4	2.4	15	32	42	147	53	40	18	..	79	Sierra Leone
8	3.1	20	36	48	126	..	..	..	..	76	Somalia
36	2.4	47	60	62	66	..	..	..	..	..	South Africa
25	2.7	13	22	50	102	..	..	..	..	73	Sudan
25	3.1	5	33	48	115	63	63	4	4	..	Tanzania
4	3.5	11	26	54	88	103	80	22	10	57	Togo
16	2.5	7	10	47	117	77	..	13	..	52	Uganda
37	3.2	26	40	52	94	78	67	24	16	28	Zaire
8	3.7	23	50	50	82	95	91	20	14	27	Zambia
10	3.4	14	28	61	49	125	126	52	42	33	Zimbabwe
Asia and the Pacific											
..	..	9	..	42	..	24	16	8	5	71	Afghanistan
17	1.5	83	86	77	8	106	105	82	83	+	Australia
107	2.3	6	16	52	105	70	64	17	11	65	Bangladesh
1	2.1	3	5	49	122	26	20	5	2	62	Bhutan
8	2.6	11	12	50	117	..	..	..	..	65	Cambodia
1,134	1.4	18	56	70	29	135	128	44	38	27	China
6	1.4	89	94	78	7	105	104	73	75	..	Hong Kong (UK)
850	2.1	19	27	59	92	98	82	43	31	52	India
178	1.8	16	31	62	61	118	115	47	43	23	Indonesia
124	0.6	67	77	79	5	102	102	96	97	+	Japan
22	..	45	60	71	26	103	106	..	..	..	Korea, People's Dem. Rep.
43	1.1	32	72	71	17	108	109	86	84	+	Korea, Rep.
4	2.7	8	19	49	103	111	98	27	22	..	Lao PDR
18	2.6	26	43	70	16	96	96	59	59	22	Malaysia
2	2.8	42	52	63	62	98	100	..	..	..	Mongolia
42	2.1	21	25	61	64	103	100	24	23	19	Myanmar
19	2.6	4	10	52	121	86	57	30	17	74	Nepal
3	0.9	79	84	75	10	106	105	88	89	+	New Zealand
112	3.1	24	32	56	103	38	27	20	12	65	Pakistan
4	2.5	5	16	55	57	73	67	13	10	48	Papua New Guinea
61	2.4	32	43	64	41	111	110	73	75	10	Philippines
3	2.2	100	100	74	7	110	109	69	71	..	Singapore
17	1.4	20	21	71	19	107	106	74	76	12	Sri Lanka
56	1.8	13	23	66	27	86	..	28	..	7	Thailand
66	2.1	16	22	67	42	..	..	..	..	12	Viet Nam

Note: Table includes countries with 1 million population or more. Numbers in italics are for years other than those listed.

Data Table 2

Country and city	Air quality				(5) Type of site *
	Suspended particulate matter		Sulfur dioxide		
	(1)	(2)	(3)	(4)	
	Annual mean level (micrograms per cubic meter) 1987-90	Average annual growth rate (percent) 1979-90	Annual mean level (micrograms per cubic meter) 1987-90	Average annual growth rate (percent) 1979-90	
Australia					
Melbourne	58	-4.5	6	-14.3	CCC
Sydney	114	2.2	28	-10.9	CCC
Belgium					
Brussels	22	-3.3	42	-11.5	CCC
Brazil					
São Paulo	98	-9.1	41	-7.5	..
Canada					
Hamilton	89	-2.8	36	-4.4	CCC; SR
Montreal	61	-1.8	23	-11.0	CCC
Toronto	61	-0.5	14	4.0	CCC
Vancouver	42	-4.5	21	-7.0	CCC
China					
Beijing	370	-1.6	115	-1.3	CCR
Guangzhou	234	7.4	95	7.7	CCR
Shanghai	290	3.8	104	9.2	CCR
Shenyang	465	-0.4	88	1.8	CCR
Xian	580	6.7	100	-1.4	CCR
Denmark					
Copenhagen	34	3.4	30	-0.5	CCC
Finland					
Helsinki	81	2.0	20	-3.8	CCC; SI
Germany					
Frankfurt	42	0.5	36	-7.2	CCC
Ghana					
Accra	137	3.5	..	..	SR
Greece					
Athens	178	-6.0	34	-4.8	CCC
Hong Kong (UK)					
Hong Kong	132	14.9	64	47.3	..
India					
Bombay	140	-1.1	23	1.8	CCC
Calcutta	393	-1.0	54	4.6	CCC
Delhi	301	-1.3	33	23.9	CCR
Indonesia					
Jakarta	271	2.2	..	..	CCR
Iran, Islamic Rep.					
Tehran	261	-2.4	165	6.9	CCC
Japan					
Osaka	42	-6.3	28	-8.4	CCC
Tokyo	50	-4.9	20	-8.9	CCC
Malaysia					
Kuala Lumpur	119	-3.9	24	-12.4	SC; SI
Pakistan					
Lahore	496	-5.1	..	..	SR
Philippines					
Davao	205	-2.4	..	..	SI
Manila	90	0.8	34	-12.0	SI
Portugal					
Lisbon	99	0.4	27	-3.0	CCR
Thailand					
Bangkok	105	-2.4	14	-1.7	SR
United States					
Birmingham, Ala.	75	-3.0	..	..	CCC
Chicago, Ill.	99	-6.2	..	..	CCI
Fairfield, Ill.	53	-5.6	..	..	SI
Harris County, Penn.	54	-4.8	..	..	SR
Houston, Tex.	62	-7.3	8	-32.0	CCC; SR
New York City, N.Y.	61	-2.2	60	-5.8	CCR
Former Yugoslavia					
Zagreb	135	-1.7	92	-4.3	CCC

* Type of site: CCC, city center commercial; CCI, city center industrial; CCR, city center residential; SI, suburban industrial; SR, suburban residential; SC, suburban commercial.

.. Data not available.

Note: Numbers in italics are for years other than those listed.

Definitions and Notes

Access to safe water. Measured by the number of people who have a reasonable means of getting clean water, expressed as a percentage of the total population. It reflects the health of a country's people and the country's ability to collect, clean, and distribute water. In urban areas, "reasonable" access means there is a public fountain or water spigot within 200 meters of the household. In rural areas, it implies that members of the household do not have to spend excessive time each day fetching water. Water is safe or unsafe depending on the amount of bacteria in it.

Acid rain. Rain, snow, or falling dry particles that contain high levels of acid. This acid is created when sulfur and other emissions from burning fossil fuels combine with water vapor, sunlight, and oxygen in the earth's atmosphere. It increases the acidity of lakes, ponds, and sometimes the soil, endangering plant and animal life. It can also eat away at buildings, the paper in books, and many other materials.

Adult illiteracy rate. The percentage of the population over age 15 who cannot, with understanding, read and write a short, simple statement on their everyday life.

Air pollution. Includes suspended solid and liquid particulate matter from smoke, dust, and soot; lead; and various gases including carbon dioxide, carbon monoxide, ground-level ozone, hydrocarbons, nitrogen oxide, and sulfur dioxide.

Averages. The averages for groups of countries in this book are weighted to take into account differences in the size of populations of countries. They give a more accurate picture than simple averages.

Bilharzia. A life-threatening parasitic disease caused by a worm that lives in a host snail. Humans can become infected when they come in contact with water in ponds and rivers where the snail lives. Occurs most often in tropical regions. Also called schistosomiasis.

Billion. One billion equals 1,000,000,000.

Biomass. Wood, charcoal, and dung used as a source of renewable energy for cooking, heating, and power production.

Carbon dioxide (CO₂). A gas formed when animals breathe and when animal or vegetable matter decays or burns; absorbed by plants in photosynthesis. Large amounts of carbon dioxide are often produced as people burn biomass, fossil fuels, and other materials to get energy for cooking, heating, transportation, industrial production, and other activities.

Carbon dioxide emissions per capita. Measured as the tons of carbon a country releases into the atmosphere during a period of time, usually one year, divided by its total population. These emissions reflect how industrialized a country is and how much energy its people consume.

Celsius. An international system for measuring temperature. To get the equivalent in Fahrenheit temperature, multiply the Celsius temperature by 9/5 and add 32 degrees to the result. For example, 1.5° C is 34.7° F.

CFCs (chlorofluorocarbons). Several useful, inexpensive gases, developed by researchers, that serve as coolants in refrigerators and air conditioners and as propellants in aerosol spray cans. Although these gases were originally considered harmless, scientists have learned that CFCs accumulate in the earth's atmosphere, where they destroy the earth's protective ozone layer and function as greenhouse gases to trap the sun's heat. Their use is now controlled by the Montreal Protocol, an international agreement signed by many countries.

CFC use (net annual atmospheric increase). The amount by which a country increases the total amount of chlorofluorocarbons in the earth's atmosphere over a period of one year.

Change in forest area. The increase or decrease in forest and woodland area during a period of time, usually one year, expressed as a percentage of that area at the start of the period. It reflects the gain or loss of trees, of homeland for indigenous peoples, and of habitat for plants and animals.

Developing countries. Includes all low- and middle-income countries, as well as the 5 high-income developing countries. There are 106 developing countries; their population totals more than 4.2 billion (four-fifths of the world's population). They are sometimes called the Third World, the South, and less developed countries (LDCs).

Diarrheal illness. A disease that affects the intestines. Most victims are children in developing countries, who may die from the resulting dehydration.

Economic growth. The process by which a country increases its ability to produce goods and services.

Ecosystem. A community of plants and animals existing in an environment that supplies them with the water and other elements they need for life.

Elephantiasis. A disease, often found in tropical countries, in which parts of the human body become enlarged. It is caused by small roundworms that are injected into the body by mosquitoes.

Energy use per capita. The amount of energy consumed during a period of time, usually one year, divided by the population. This includes energy created directly by burning fossil fuels, as well as electricity generated from nuclear power, geothermal power, hydropower, and fossil fuels, all measured in equivalent amounts of oil. The use of biomass, though substantial in some developing countries, is not counted in this measure because reliable data are not available. The term "commercial" energy refers to energy generated from sources other than biomass.

Fossil fuels. Coal, natural gas, oil, and other petroleum products formed from the decayed bodies of animals and plants that died millions of years ago. Fossil fuels are a nonrenewable source of energy.

Fuelwood. Wood, obtained by cutting trees and shrubs, that is used as fuel for heating and cooking. In developing countries much of the deforestation of tropical dry forests is from people gathering fuelwood, either for their own use or for making into charcoal, which they can then sell.

Geothermal energy. Renewable energy generated by using the heat of the earth's interior (for example, by harnessing steam that is vented to the earth's surface).

Global warming. The apparent increase in the temperature of the earth, caused in part by the accumulation of greenhouse gases.

GNP per capita. The dollar value of a country's final output of goods and services (its GNP or gross national product) during a period of time, usually one year, divided by its population. It reflects the value of a country's economic activity and the income of its residents. It does not show whether all people share equally in the wealth of a country.

Greenhouse gases. Gases that trap solar heat within the earth's atmosphere, creating a "greenhouse" effect that may increase the temperature of the earth. Examples include water vapor (which occurs naturally and causes the most global warming), carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons (CFCs).

Hectare. A unit that measures land area; 1 hectare equals 2.47 acres.

High-income developing countries. Countries regarded as developing because of their economic structure, although their income levels would place them with industrial countries. They include Israel, Kuwait, Singapore, and the United Arab Emirates, as well as the British crown colony of Hong Kong.

Hookworm. An intestinal parasite found in tropical and subtropical regions. It passes through the skin, especially bare feet, and is spread by unsanitary conditions.

Hydropower. Renewable power generated from moving water.

Indigenous peoples. Tribal people who are native to a particular area—for example, the tropical moist forests of Brazil—and whose cultures are often very old and not industrialized.

Industrial countries. Countries in which most people have a high standard of living and many goods and services. There are currently 19 industrial countries; their total population is about 0.8 billion (less than one-fifth

of the world's population). They are also known as high-income countries, developed countries, and the North.

Industrial waste. Material—for example, chemicals or even very hot water—left over from a manufacturing process. It can sometimes be harmful and may pollute the environment if not disposed of properly.

Infant mortality rate. The number of infants, out of every 1,000 babies born in a given year, who die before reaching age 1. The lower the rate, the fewer the infant deaths.

Life expectancy at birth. The average number of years newborn babies can be expected to live if health conditions stay the same. This indicator reflects environmental conditions in a country, the health of its people, the quality of care they receive when they are sick, and their living conditions.

Low-income countries. Developing countries with a low standard of living, where many people cannot meet their basic needs. There are 43 low-income countries; their total population is more than 3 billion.

Mean. The value that is midway between two extremes. For example, 65 is the mean of 50 and 80.

Meter. A unit of length equal to 39.37 inches. For example, 0.2 meters equals about 7.9 inches.

Middle-income countries. Developing countries with a higher standard of living than low-income countries, but where many people still cannot meet their basic needs. There are 58 middle-income countries; their total population is more than 1 billion.

Natural resources. Materials that occur in nature and are essential or useful to humans, such as water, air, land, forests, fish and wildlife, topsoil, and minerals.

Nonreporting nonmember countries. The countries—Cuba, the People's Democratic Republic of Korea, and the former USSR—that were not members of the World Bank as of 1990 and for which the Bank has only limited data. More than 0.3 billion people live in these countries.

Nuclear energy. Power generated by releasing the energy in the nuclei of atoms. Because nuclear energy is more expensive and poses more environmental risks than other forms of energy, experts predict it will not be widely used in developing countries.

Oil. A fossil fuel that can be refined into gasoline and other products; also called petroleum.

Ozone. A gas that at low levels is an air pollutant, but that high up in the atmosphere forms a thin shield to protect life on earth from harmful solar radiation. Scientists have discovered that chlorofluorocarbons (CFCs) destroy this high-level ozone layer.

Population growth rate (average annual). The increase in a country's population during one year, divided by the population at the start of that year.

Primary school enrollment rate. The number of students enrolled in primary school, divided by the number of children of primary school age, usually 6 through 11 years old. (In some countries the rate is above 100 percent, because some students enrolled are either younger or older than the normal age limit.)

Renewable. Able to be replaced or replenished, either by the earth's natural processes or by human action. Air, water, and forests are examples of *renewable* resources; minerals and fossil fuels are examples of *non-renewable* resources.

Sanitation. Basic sewerage and drainage systems to collect waste water and then clean and redistribute it.

Secondary school enrollment rate. The number of students enrolled in secondary school, divided by the number of children of secondary school age, usually 12 through 17 years old. (In some countries the rate is above 100 percent, because some students enrolled are either younger or older than the normal age limit.)

Sulfur dioxide. An air pollutant produced when fossil fuels are burned. It contributes to acid rain and can affect human health. Both the *annual mean level* and the *average annual growth rate* in Data Table 2 cover periods of several years, which provides a better picture than would a single year.

Suspended particulate matter (SPM). Smoke, soot, dust, and liquid droplets from fuel combustion that are in the air. The amount of SPM reflects the quality of the air people are breathing and the state of a country's technology and pollution control. Both the *annual mean level* and the *average annual growth rate* in Data Table 2 cover periods of several years, which provides a better picture than would a single year.

Temperate forests. Forests found in the temperate regions of the world. They cover 1.6 billion hectares, three-fourths of which are in industrial countries.

Tropical dry forests. Forests found in the dryer areas of the tropical regions of the world. They cover 1.5 billion hectares, three-fourths of which are in Africa.

Tropical moist forests. Forests found in moist conditions in the tropical regions of the world. They can be subdivided into rain forests and deciduous forests. The rain forests, which account for two-thirds of tropical moist forests, have the richest diversity of plants and animals and contain valuable tropical hardwood. The deciduous forests grow on the edge of the rain forests and are less complex. Tropical moist forests cover 1.5 billion hectares, two-thirds of which are in Latin America, with the rest in Africa and Asia.

Urban population as a percentage of total population. The number of people living in urban areas, divided by the total number of people in a country.

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